AMENDMENTS TO THE CLAIMS

Listing of Claims

1. (Currently Amended) A service node for coupling a **remote** client to a network having at least one server, said service node comprising:

   a) a gateway configured for connection to a network;

   b) a switch configured for connection to a **remote** client;

   c) a data routing system extending from said switch to said gateway, said switch, data routing system and gateway collectively forming a path, through said service node, configured for coupling said **remote** client to said network;

   d) a bandwidth measurement device coupled to said gateway, said bandwidth measurement device configured for independently determining upload or download data transfer rates of data packets transferred between said **remote** client and said gateway, and for distinguishing the upload or download data transfer rate between the **remote** client and the gateway from the upload or download data transfer rate between the **remote** client and the network;

   e) a measurement application resident on said bandwidth measurement device, said measurement application determining said upload or download data transfer rates for said bandwidth measurement device; and

   f) an applet maintained by said measurement application suitable for download to said **remote** client; configured for independently determining upload or download data transfer rates between said **remote** client and said ~~service node~~**gateway**, wherein, if determining said upload data transfer rate between said **remote** client and said ~~service node~~**gateway**, said downloaded applet generates said data packets

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originating at said **remote** client and, if determining said download data transfer

rate between said ~~service node~~ **gateway** and said **remote** client, said downloaded

applet determines said download data transfer rate based upon an analysis of said

data packets generated by said measurement application upon arrival at said **remote**

client.

2.   (Original)   The service node of claim 1 wherein said data routing system is comprised

of a router coupled to said switch and said gateway.

3.   (Canceled).

4.   (Previously Presented) The service node of claim 1 wherein said switch is an ATM edge

switch.

5.   (Previously Presented) The service node of claim 1, wherein the service node is an internet

service provider and said network is the Internet.

6.   (Previously Presented) The service node of claim 1 wherein said bandwidth measurement

device is a server.

7-9.   (Canceled)

10.   (Currently Amended) The service node of claim 6, wherein a web application resides on

said bandwidth measurement server, said **remote** client accessing said measurement application

via said web application.

11.   (Previously Presented) The service node of claim 10, wherein said bandwidth measurement

server further comprises a measurement database coupled to said measurement application, said

measurement database maintaining data collected during measurement of said upstream or

downstream data transfer rates.

12.   (Currently Amended) An intranet for providing on-demand Internet access to subscribers, said intranet comprising:

    a)   a service node; and

    b)   a plurality of subscriber terminals, each one of said plurality of subscriber terminals coupled to said service node by a corresponding xDSL line;

    c)   said service node comprising:

        i.   a switch coupled to each one of said plurality of xDSL lines;

        ii.   a gateway coupled to the Internet;

        iii.   a data routing system extending from said switch to said gateway, said switch data routing system and gateway collectively forming a path, through said service node, for coupling each one of said plurality of subscriber terminals to the Internet; and

        iv.   a bandwidth measurement device coupled to said path, said bandwidth measurement device configured for independently determining upload or download data transfer rates between said ~~service node~~ <u>gateway</u> and requesting ones of said plurality of subscriber terminals which access said bandwidth measurement device, and for distinguishing the upload or download data transfer rate between the <u>remote</u> client and ~~the~~ <u>said</u> gateway from the upload or download data transfer rate between ~~the client~~ <u>said</u> <u>requesting ones of said subscriber terminals</u> and the ~~network.~~<u>Internet;</u>

    <u>d)   a measurement application resident on said bandwidth measurement device, said measurement application determining said upload or download data transfer rates for said bandwidth measurement device; and</u>

e)   an applet maintained by said measurement application suitable for download to said requesting ones of said subscriber terminals; configured for independently determining upload or download data transfer rates for said requesting ones of said subscriber terminals, wherein, if determining said upload data transfer rate between said requesting ones of said subscriber terminals and said gateway, said downloaded applet generates said data packets originating at said requesting ones of said subscriber terminals and, if determining said download data transfer rate between said Internet and said requesting ones of said subscriber terminals, said downloaded applet determines said download data transfer rate based upon an analysis of said data packets generated by said measurement application upon arrival at said requesting ones of said subscriber terminals.

13.   (Original)   The intranet of claim 12, wherein said data routing system is comprised of a router coupled to said switch and said gateway.

14.   (Original)   The intranet of claim 13, wherein said bandwidth measurement device is coupled to said gateway, said requesting ones of said plurality of subscriber terminals accessing said bandwidth measurement device through said gateway.

15.   (Original)   The intranet of claim 14, wherein said bandwidth measurement device is further coupled to said router and wherein said intranet further comprises a service provider terminal coupled to said router, said service provider terminal accessing said bandwidth measurement device through said router.

16.   (Original)   The intranet of claim 15, wherein said bandwidth measurement device is a server.

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17.   (Previously Presented) The intranet of claim 16, wherein a measurement application resides on said bandwidth measurement server, said measurement application performing said measurements of said upload or download data transfer rates for said requesting ones of said plurality of subscriber terminals.

18.   (Original)   The intranet of claim 17, wherein a web application resides on said bandwidth measurement server, said requesting ones of said plurality of subscriber terminals accessing said measurement application through said web application.

19.   (Previously Presented) The intranet of claim 18, wherein said bandwidth measurement server further comprises a measurement database coupled to said measurement application, said measurement database maintaining data collected during measurement of said upstream or downstream data transfer rates for said requesting ones of said plurality of subscriber terminals.

20.   (Original)   The intranet of claim 19, wherein said measurement database is further coupled to said web application, said service provider terminal accessing said data maintained in said measurement database through said web application.

21-28. (Canceled)

29.   (Currently Amended) The service node of claim 1 further comprising: a baseline data transfer rate, wherein the upload or download data transfer rate between the **remote** client and the gateway is compared to the baseline data transfer rate to determine whether any problems exist between the **remote** client and the gateway.

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